

Retro-reflective etalon and the devices using the same

Abstract

Described are optical devices called retro-reflective etalon filter and wide tunable semiconductor lasers using the retro-reflective etalon filter. The reflection optical spectrum of the retro-reflective etalon has the double-pass transmission characteristic of the etalon used within the retro-reflective etalon. The retro-reflective etalon(s) can be used as the reflective end mirror(s) of the wide tunable semiconductor laser. The retro-reflective etalon also can act as the wavelength locker of the laser. The proposed retro-reflective etalon is easy to be manufactured and the wide tunable semiconductor lasers are easy to be implemented by using the retro-reflective etalon.